

REMARKS/ARGUMENTS

Specification

Applicant has made the corrections to the specification as requested.

Rejection Under 35 U.S.C. § 102

Claims 1, 2, 7-10, and 15-18 are rejected under 35 U.S.C. 102(b) as being anticipated by United States Patent 3,830,106 to Gardiner et al.

Rejection Under 35 U.S.C. ¶ 103

Claim 11 is rejected is rejected under 35 U.S.C. 103(a) as being unpatentable over Gardiner et al. as applied to claim 1 above, and further in view of United States Patent 5,582,794 to Hagiwara et al.

Claim 12 is rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Gardiner et al.

Claims 3 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gardiner et al. as applied to claim 1 above, and further in view of United States Patent 5,334,189 to Wade.

Claims 1-3, 6, and 12-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over United States Patent 5,889,217 to Rossabi et al. in view of United States Patent 5,465,628 to Timmons, "Field Tests of Diffusion Samplers for Inorganic Constituents in Wells and at a Ground-Water-Discharge Zone" to Vroblesky et al. and United States Patent 5,334,189 to Wade.

Allowed and Objected to Claims

Claims 19 and 20 are allowed. Presumably they are viewed as allowable if amended into independent form including all of the limitations of the base claim and any intervening claims.

Claim 5 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 5, 19 and 20

Claim 5 has been amended as suggested, by incorporating the limitations of base claim 1 and intervening claims 3 and 4. Claim 19 has been amended to incorporate the limitations of base claim 1. Claim 20 remains dependent on claim 19. It is respectfully submitted that claims 5, 19 and 20 are now allowable.

Claim 1, 2, 7-10, and 15-18

As noted, claim 1, 2, 7-10, and 15-18 are rejected under 35 U.S.C. 102(b) as being anticipated by United States Patent 3,830,106 to Gardiner et al.

The Gardinier et al. patent describes a device for "removing dialysable materials . . . for analysis . . . [from] a reacting medium without withdrawing samples therefrom." Gardinier et al., claim 1, col. 4, lines 22-23, 35-36. In particular, Gardinier states:

The device according to the invention can be used to provide a continuous sample from a working liquid which can then be analysed by any convenient method. Where continuous analysis methods are available, it is thus possible continuously to measure components in the working liquid . . .

Gardinier, col. 3, lines 32-37. Thus, Gardinier seeks continuous information, apparently to track a process where updated information is the objective.

By contrast, as shown in applicant's claim 1 as amended, applicant seeks not a continuous sample but an equilibration sample. As set forth in claim 1, applicant has:

a source of pressurized fluid communicating with at least one of the first and second channels for selectively causing a volume of the carrier fluid to remain in the chamber in contact with the semipermeable membrane for a specified equilibration period and thereafter transporting at least a portion of the volume to a sample delivery site

This is a fundamentally different approach, useful in situations where the sampling environment is not easily observed and thus not well understood or controlled. The equilibration period is

selected so that the sample is representative of a concentration of the analyte in the environment applicant wishes to test. Full equilibration may or may not be achieved in the defined residence or exposure period of the carrier fluid volume in the chamber; however, there is no desire or need for continuous measurement, because the processes that might cause variation are typically longer term and a steady state measurement is what is desired. An example of the environment and processes discussed in applicant's specification is analytes found in ground water or other subsurface natural environments that have been polluted.

The distinction and teaching away relative to applicant's device is emphasized by the following passage from the Gardinier et al. patent that shows Gardinier et al.'s interest in residence time is only to achieve a minimum concentration level sufficient for measurement:

Thus, the helical passage should preferably not be unnecessarily long although the residence time of the carrier fluid in the helical passage must be at least sufficient to provide a sample having a minimum concentration of ingredient to be analysed for which the analytical techniques to be used are sensitive.

Gardinier et al., col. 2, lines 29-34.

It is submitted that Gardinier et al.'s continuous sample approach does not anticipate nor does it make obvious applicant's invention as claimed in amended claim 1. Claims 2, 7-10, and 15-18 dependent on claim 1 are also not anticipated nor made obvious, in view of their additional features. Reconsideration and removal of the rejection of claims 1, 2, 7-10, and 15-18 in view of Gardinier et al. are respectfully requested.

Claims 11-12, 3, 4

The Office Action rejects claims 11-12, 3, 4 as obvious in view of the Gardinier et al. patent by itself or in various combinations with the Hagiwara and Wade patents. But the Hagiwara and Wade patents do not remedy the teaching deficiency and teaching away of Gardinier et al. Reconsideration and removal of the rejection of claims 11-12, 3 and 4 are respectfully requested.

Claims 1-3, 6, 12-14

As noted, claims 1-3, 6, and 12-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over United States Patent 5,889,217 to Rossabi et al. in view of United States Patent 5,465,628 to Timmons, "Field Tests of Diffusion Samplers for Inorganic Constituents in Wells and at a Ground-Water-Discharge Zone" to Vroblesky et al. and United States Patent 5,334,189 to Wade.

Rossabi et al. teaches a conventional sampling system where actual volumes of the to-be-sampled material in the environment surrounding the sampling device are removed from the environment for delivery elsewhere. Because Rossabi et al. is taking in actual material (not just selecting out an analyte) and wishes to control intake flow, there is a set of check valves 41, 43 (col. 5, lines 23-29) used. These not only add complexity undesirable in remote environmental locations, but they teach away from applicant's idea of equilibration of an analyte concentration across a semipermeable membrane and from the suggested combination of Rossabi with Timmons' filter, which the Office Action argues to be a semi-permeable member. Office Action, para. 8. Assuming arguendo that Timmons' filter is a semi-permeable member, it is not taught how the Rossabi check valves would work effectively with a semi-permeable membrane. The nature of semipermeable membrane selection is not consistent with the pressures needed to open check valves. In any event, neither reference teaches how these two approaches would be combined and work together and how they could produce applicant's device using equilibration across a membrane. It is respectfully submitted that the required prima facie case for obviousness is not made. The additional prior art cited as part of combinations with Rossabi et al. to support Section 103 rejections does not remedy the teaching deficiency and teaching away of Rossabi et al.

It is submitted that Rossabi et al. and the additional cited prior art do not make obvious applicant's invention as claimed in amended claim 1. Claims 2-3, 6, and 12-14 dependent on claim 1 are also not anticipated nor made obvious, in view of their additional features. Reconsideration and removal of the rejection of claims 1, 2-3, 6, and 12-14 are respectfully requested.

Petition and Fees

A petition to extend the time for response for three months and the corresponding payment accompany this Amendment and Response. The total number of claims remains 20 and the number of independent claims is 3. Thus, this filing does not appear to require additional fees. However, in reviewing the original filing, the undersigned noted that there were multiple dependent claims and it appears that no fees for multiple dependent claims were paid at the original filing. Accordingly, applicant respectfully requests that the appropriate fees now be assessed. Claims 6, 9 and 12 had multiple dependencies at the time of filing and continue to have them. Claim 5 had multiple dependencies at filing but no longer has them following this Amendment and Response. Any additional fees required may be assessed against Deposit Account 04-1420.

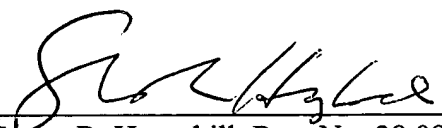
Conclusion

This application now stands in allowable form and reconsideration and allowance is respectfully requested.

Respectfully submitted,

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